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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,250	12/05/2006	Bernd Pfannschmidt	PFANNSCHMIDT-4	1923

20151 7590 02/03/2010

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EXAMINER

MOK, ALEX W

ART UNIT	PAPER NUMBER
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2834

NOTIFICATION DATE	DELIVERY MODE
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02/03/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/595,250	Applicant(s) PFANNSCHMIDT, BERND	
	Examiner ALEX W. MOK	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,4-13,15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,4-13,15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/16/09 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2, 4, 5, 7-9, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hannes (German Patent Document No.: DE 10122425 A1) in view of Muramoto et al. (Japanese Patent Document No.: JP 11255118 A) and Potter (US Patent No.: 2846600).

For claim 4, Hannes discloses a drive comprising a stator (reference numeral 31, figure 3); a rotor (reference numeral 32) interacting with the stator and coupled mechanically with a wheel set shaft (reference numeral 322) of the wheel set, and a cooling device (see figure 3) constructed to cool the rotor and including a fan (reference

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numeral 34) for drawing in air through an air inlet (reference numeral 319) and conducting the air through a cooling channel (reference numeral 37) inside the rotor.

Hannes does not specifically disclose the wheel set, nor the barrier located in an area within the rotor in close proximity adjacent to the wheel set shaft.

Muramoto et al. disclose wheels, i.e. wheel set, attached to the shaft (reference numeral 28, figure 1).

Potter discloses a barrier component (reference numeral 14) located in an area within the rotor in close proximity to the shaft (see the figure).

It would have been obvious to include the barrier of Potter and the wheel set of Muramoto et al. in the invention of Hannes since providing wheels to the rotor of a motor is a well known skill in the art as exhibited by Muramoto et al., and the barrier component as taught by Potter can be included in the invention by a person of ordinary skill for the purpose of protecting against foreign matter when air is drawn in.

For claim 2, Hannes discloses the invention including the stator and the rotor (reference numerals 31, 32, figure 3), but does not specifically disclose the wheel set having two wheels mounted to the wheel set shaft, and the wheel set shaft being completely enveloped in an area between the wheels by the electric machine.

Muramoto et al. disclose this configuration (reference numeral 28, figure 1).

It would have been obvious to include this wheel set configuration of Muramoto et al. in the invention of Hannes for the purpose of proper operation of the motor and also providing protection for the shaft.

For claim 5, Hannes discloses the rotor having at least one rotor hub which is coupled mechanically to the wheel set shaft (see numeral 318 in figure 3), and Hannes also discloses the rotor having a web since the channel (reference numeral 37) is formed in the rotor, and therefore the surface of the channel inherently forms the “web” through the rotor, of which would support a rotor reaction part (reference numeral 315, figure 3).

For claim 7, Hannes and Muramoto et al. disclose the claimed invention except for the barrier being a dirt guide device. The barrier of Potter (reference numeral 14) can be considered to be the dirt guide device, and it would have been obvious to include this device of Potter in the inventions of Hannes and Muramoto et al. for the purpose of protecting against foreign matter.

For claim 9, Hannes discloses a jacket (reference numeral 311, figure 3), and when applied between the wheels of the wheel set of Muramoto et al., this would constitute a continuous jacket for the wheel set shaft.

4. Claims 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hannes in view of Muramoto et al. and Potter as applied to claim 4 above, and further in view of Mizuyama et al. (US Patent No.: 4383191).

For claim 8, Hannes, Muramoto et al. and Potter disclose the claimed invention except for the barrier including a baffle wall disposed in the air inlet for deflecting foreign matter.

Mizuyama et al. disclose a baffle wall (reference numeral 12) disposed on the side of the rotor, i.e. disposed in the air inlet for deflecting foreign matter (see figure 3).

It would have been obvious to include this configuration of Mizuyama et al. in the structure of Hannes in view of Muramoto et al., and Potter for the purpose of protecting against foreign matter.

For claim 15, Hannes discloses the baffle wall having a slanted configuration (see figure 3).

5. Claims 6, 10-12, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hannes in view of Muramoto et al., and Potter as applied to claim 4 above, and further in view of Hellmund (US Patent No.: 1238292).

For claim 6, Hannes, Muramoto et al., and Potter disclose the claimed invention except for the barrier including the catch device for preventing foreign matter from impacting the wheel set shaft, with the catch device having a first section forming part of the fan.

Hellmund discloses a similar configuration for the catch device (reference numeral 16, figure 1) which is part of the fan (reference numeral 10).

It would have been obvious to include the catch device of Hellmund in the structure of Hannes in view of Muramoto et al. and Potter since Hellmund uses this for a machine having ventilation means and prevention of foreign substances from entering the device (see page 1, lines 10-21), the same technological field as the claimed

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invention, and a person of ordinary skill would have applied this for the purpose of protecting the wheel set shaft.

For claim 10, Hannes, Muramoto et al., and Potter disclose the claimed invention above except for the rotor having a dirt-binding surface.

Hellmund discloses a surface (reference numeral 16) that can be considered a dirt-binding surface.

It would have been obvious to have this surface of Hellmund in Hannes in view of Muramoto et al. and Potter since the invention of Hellmund is related to ventilation means, the same technological field as the claimed invention, and a person of ordinary skill would have applied this for the purpose of preventing dirt from further damaging the device.

For claim 11, Hannes, Muramoto et al., and Potter disclose the claimed invention except for the catch device having a second section in close proximity of the air inlet.

Hellmund discloses a similar catch device as explained for claim 6 above.

It would have been obvious for a person of ordinary skill to have the catch device of Hellmund be in close proximity of the air inlet in Hannes in view of Muramoto et al. and Potter since this would serve the purpose of preventing dirt from further damaging the device.

For claim 12, Hannes discloses a cooling channel (reference numeral 37), but does not specifically teach the cooling channel having an inside wall formed with a dirt-binding surface.

Hellmund discloses a dirt-binding surface as explained for claim 10 above.

It would have been obvious to apply this surface of Hellmund for the cooling channel in Hannes in view of Muramoto et al. and Potter for the purpose of preventing dirt from damaging the device.

For claim 16, Hannes, Muramoto et al., and Potter disclose the claimed invention except for the first and second sections of the catch device having an inwardly turned nose.

Hellmund discloses a similar catch device with an inwardly turned nose (see figure 1).

It would have been obvious to include this feature of Hellmund in Hannes in view of Muramoto et al. and Potter since this would provide further protection from dirt damaging the device.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hannes, in view of Muramoto et al., Potter, and Hellmund as applied to claim 10 above, and further in view of Schneider (German Patent Document No.: DE 4427760 A1).

For claim 13, the combination of Hannes in view of Muramoto et al., Potter and Hellmund disclose the claimed invention, but do not specifically teach the surface being sticky. Schneider discloses a motor with a rotor having a sticky layer on its surface (see the English Abstract). It would have been obvious to apply the teachings of Schneider and modify the combination of Hannes in view of Muramoto et al., Potter and Hellmund so that the dirt-binding surface would be sticky for the purpose of further protecting the device from damage.

Response to Arguments

7. Applicant's arguments with respect to claims 2, 4-13, 15, and 16 have been considered but are moot in view of the new ground(s) of rejection. Also it is suggested that additional limitations regarding the structure of the barrier and the catch device in independent claim 4 such as the barrier's shape and how it is positioned along the rotor and shaft and how the catch device is placed along the cooling channel and shaft would be beneficial in further defining the applicants' invention.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX W. MOK whose telephone number is (571)272-9084. The examiner can normally be reached on 7:30-5:00 Eastern Time, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen P. Leung can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quyen Leung/
Supervisory Patent Examiner, Art Unit 2834

/A. W. M./
Examiner, Art Unit 2834